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SECTION 2 Growth and Development QUESTIONS

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1. Infants born small for gestational age, or prematurely, usually exhibit catch-up growth in the
   A. first 6 months
   B. second 6 months
   C. first birthday
   D. second year of life
   E. third year of life

2. The daily weight gain in the first 3–4 months of life is
   A. 10–20 gm
   B. 20–30 gm
   C. 30–40 gm
   D. 40–50 gm
   E. 50–60 gm

Weight loss in first few days: 5%–10% of birth weight
Return to birth weight: 7–10 days of age
Double birth weight: 4–5 months
Triple birth weight: 1 year
Daily weight gain: *20–30 g for first 3–4 month *15–20 g for rest of the first year

3. Regarding the language skills, a 2-year-old child can
   A. count
   B. name colors
   C. define words
   D. name pictures
   E. know body parts

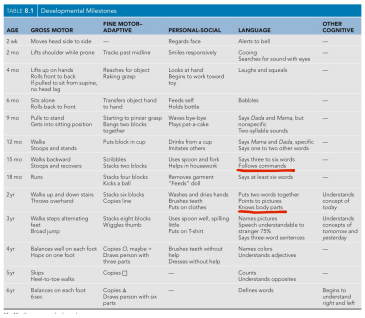

TABLE 8.1 Developmental Milestones

AGE	GROSS MOTOR	FINE MOTOR-ADAPTIVE	PERSONAL-SOCIAL	LANGUAGE	OTHER COGNITIVE
2 wk	Moves head side to side	—	Regards face	Alerts to bell	—
2 mo	Lifts shoulder while prone	Tracks past midline	Smiles responsively	Cooing Searches for sound with eyes	—
4 mo	Lifts up on hands Rolls front to back If pulled to sit from supine, no head lag	Reaches for object Raking grasp	Looks at hand Begins to work toward toy	Laughs and squeals	—
6 mo	Sits alone Rolls back to front	Transfers object hand to hand	Feeds self Holds bottle	Babbles	—
9 mo	Pulls to stand Gets into sitting position	Starting to pincer grasp Bangs two blocks together	Waves bye-bye Plays pat-a-cake	Says Dada and Mama, but nonspecific Two-syllable sounds	—
12 mo	Walks Stoops and stands	Puts block in cup	Drinks from a cup Imitates others	Says Mama and Dada, specific Says one to two other words	—
15 mo	Walks backward Stoops and recovers	Scribbles Stacks two blocks	Uses spoon and fork Helps in housework	Says three to six words Follows commands	—
18 mo	Runs	Stacks four blocks Kicks a ball	Removes garment "Feeds" doll	Says at least six words	—
2 yr	Walks up and down stairs Throws overhand	Stacks six blocks Copies line	Washes and dries hands Brushes teeth Puts on clothes	Puts two words together Points to pictures Names body parts	Understands concept of today
3 yr	Walks steps alternating feet Broad jump	Stacks eight blocks Wiggles thumb	Uses spoon well, spilling little Puts on T-shirt	Names pictures Speech understandable to stranger 75% Says three-word sentences	Understands concepts of tomorrow and yesterday
4 yr	Balances well on each foot Hops on one foot	Copies O, maybe + Draws person with three parts	Brushes teeth without help Dresses without help	Names colors Understands adjectives	—
5 yr	Skips Heel-to-toe walks	Copies □	—	Counts Understands opposites	—
6 yr	Balances on each foot 6 sec	Copies △ Draws person with six parts	—	Defines words	Begins to understand right and left

4. The average length of an infant at 1 year of age is
   A. 10 inches
   B. 20 inches
   C. 30 inches
   D. 40 inches
   E. 50 inches

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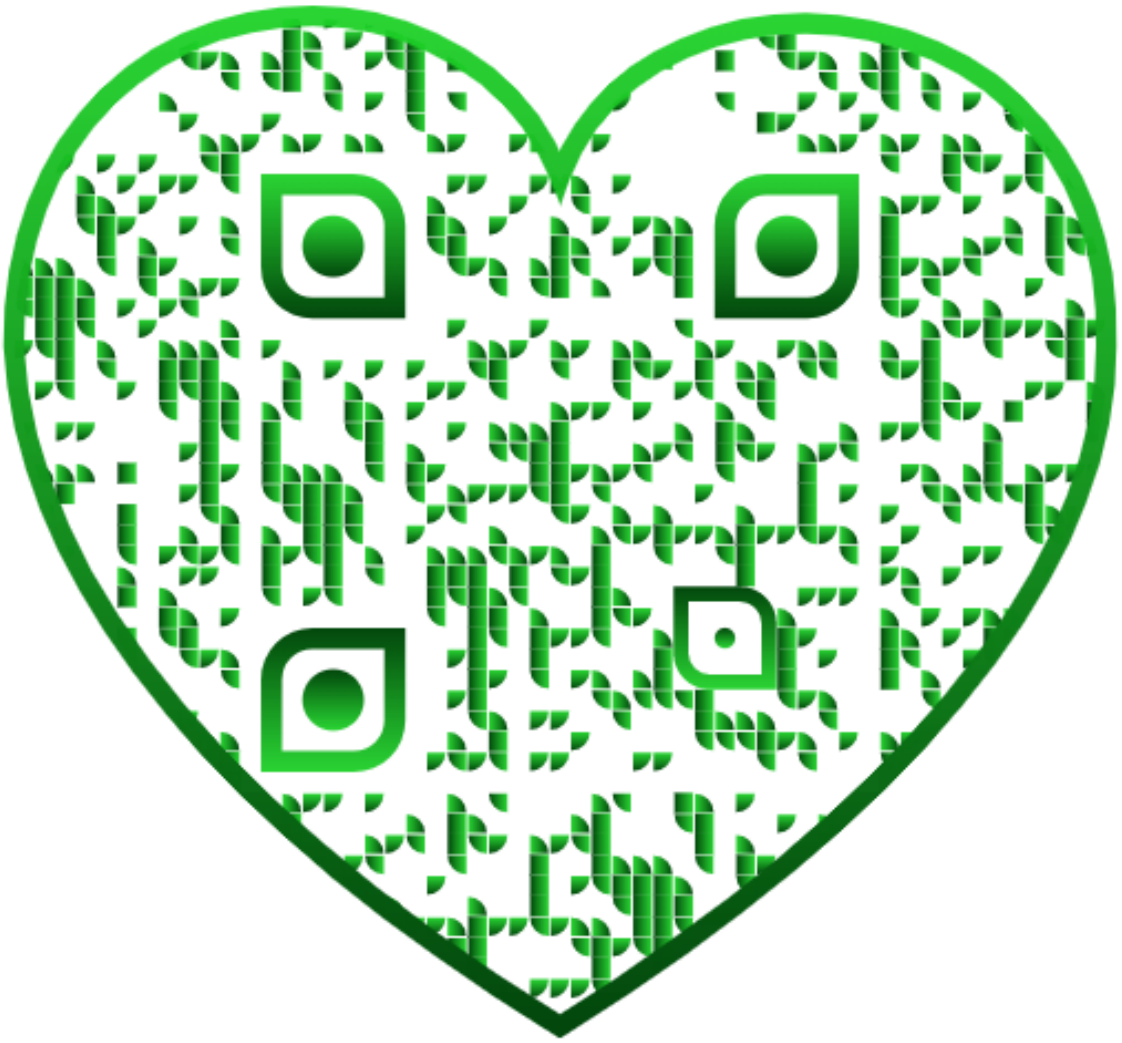
5. Head circumference (HC) increase in the first 3 months of life by
   A. 0.5 cm per month
   B. 1 cm per month
   C. 1.5 cm per month
   D. 2 cm per month



E. 2.5 cm per month

6. The child who walks backward, scribbles, and uses spoon and fork has achieved the developmental age of

A. 9 mo
B. 12 mo
C. 15 mo
D. 18 mo
E. 21 mo

7. The child who can hop on one foot, copies circles, and brushes teeth without help has achieved the developmental age of

A. 2 yr
B. 3 yr
C. 4 yr
D. 5 yr
E. 6 yr

8. Regarding speech production, the routine use of sentence sequences; conversational give and-take is usually achieved by age of

A. 3 yr
B. 4 yr
C. 5 yr
D. 6 yr
E. 7 yr

9. The clue to need a help for a child who does not respond to his or her name is by age of

A. 6 months
B. 8 months
C. 10 months
D. 12 months
E. 14 months

10. The clue to need a help for a child who does not respond correctly to “Give me” or “Sit down” or “Come here” when spoken without gestural cues is by age of

A. 15 months
B. 18 months
C. 21 months

D. 24 months
E. 28 months

11. Regarding the gross motor skills, a 2-year-old child can
A. heel-to-toe walk 5 y.o
B. balance on each foot 6 sec 6y.o
C. walk up and down stairs 2y.o
D. balance well on each foot 4 y.o
E. walk steps alternating feet 3y.o

12. The clue to need help by age of 24 months, if the child
A. speech is not understood by familiar listeners
B. speech is not understood by unfamiliar listeners
C. has not begun to ask questions (using where, what, why)
D. is not using short sentences (e.g.,"Daddy went bye-bye")
E. does not show understanding of spatial concepts: on, in, under, front, and back

13. The child begins to understand right and left by age of
A. 3 yr
B. 4 yr
C. 5 yr
D. 6 yr
C. 7 yr

14. The difficulty in putting words together, limited vocabulary, or inability to use language in a socially appropriate way is defined as a disorder of
A. fluency
B. reception
C. expression
D. resonance
E. articulation

15. The **MOST** common type of cerebral palsy is
A. ataxic cerebral palsy
B. spastic cerebral palsy
C. dystonic cerebral palsy
D. dyskinetic cerebral palsy
E. choreoathetotic cerebral palsy

16. The age by which the child can pull to stand, starting to pincer grasp, and plays pat-a-cake is

A. 6 mo
B. 7 mo
C. 8 mo
D. 9 mo
E. 10 mo

17. The American Academy of Pediatrics recommends the use of validated standardized developmental screening tools at three of the health maintenance visits, these are at

A. 2 months, 6 months, and 12 months
B. 6 months, 12 months, and 18 months
C. 9 months, 18 months, and 30 months
D. 12 months, 18 months, and 24 months
E. 12 months, 24 months, and 36 months

18. The Denver II assesses the development of children from birth to 6 years of age, it includes the following domains **EXCEPT**

A. language
B. intelligence
C. gross motor
D. personal-social
E. fine motor–adaptive

19. In infants, inferences about vision may be made by physical examination of the eye and assessment of

A. language
B. intelligence
C. gross motor
D. personal-social
E. fine motor–adaptive

Inferences about vision may be made by examining gross motor milestones (children with vision problems may have a delay) and by physical examination of the eye. Inferences about hearing are drawn from asking parents about responses to sound and speech and by examining speech and language development closely.

20. Autism screening is recommended for all children at age of

A. 12 to 18 months
B. 18 to 24 months
C. 24 to 36 months
D. 36 to 48 months
E. 48 to 60 months

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21. Because of the significant association of lead intoxication with poverty, the Centers for Disease Control and Prevention (CDC) recommends blood lead screening at

A. 6 and 12 months
B. 12 and 24 months
C. 24 and 36 months
D. 36 and 48 months
E. 48 and 60 months

22. Low birth weight or premature infants are screened for anemia at birth and again at the age of

A. 2 months
B. 4 months
C. 6 months
D. 8 months
E. 10 months

23. Centers for Disease Control and Prevention (CDC) recommend the blood lead level that may cause learning problems is

A. 1 to 5 µg/dL
B. 5 to 10 µg/dL
C. 10 to 15 µg/dL
D. 15 to 20 µg/dL
E. 25 to 30 µg/dL

Poisoning

24. The American Academy of Pediatrics (AAP) recommends the fasting total cholesterol level is elevated when serum cholesterol is

A. ≥150 mg/dL
B. ≥175 mg/dL
C. ≥200 mg/dL
D. ≥225 mg/dL
E. ≥250 mg/dL

25. All the following are cholesterol risk screening recommendations **EXCEPT**

A. family history of obesity
B. personal history of diabetes
C. family history of heart disease
D. family history of high cholesterol
E. personal history of high blood pressure

26. The **BEST** car safety issues for a 3-year- child is

A. vehicle seat belt
B. rear-facing safety seat
C. forward-facing car seat
D. lap and shoulder seat belts
E. belt-positioning booster seat

27. The body mass index (screening tool for children and adolescents to identify those overweight or at risk for being overweight) is defined as

A. body weight in pounds divided by height in inches
B. body weight in kilograms divided by height in meters squared
C. body weight in grams divided by height in centimeters squared
D. body weight in kilograms multiplied by height in meters squared
E. body weight in grams multiplied by height in centimeters squared

28. Primary amenorrhea should be considered for any female adolescent who has not reached menarche by

A. 13 years or has not done so within 3 years of thelarche
B. 14 years or has not done so within 2 years of thelarche
C. 14 years or has not done so within 3 years of thelarche
D. 15 years or has not done so within 2 years of thelarche
E. 15 years or has not done so within 3 years of thelarche

29. The child who can transfers object from hand to hand and babbles has achieved the developmental age of

A. 4 months
B. 6 months
C. 8 months
D. 10 months
E. 12 months

30. Older school-age children who begin to participate in competitive sports should have a careful evaluation of the

A. vision
B. hearing
C. sexual maturity
D. cardiovascular system
E. orthopedic deformities

31. Stranger anxiety (infants normally become insecure about separation from the primary caregiver) develops in age between

A. 6 and 9 months
B. 9 and 18 months
C. 18 and 24 months
D. 24 and 36 months
E. 36 and 48 months

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SECTION 2 Growth and Development ANSWERS

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1.**(A).** Infants born small for gestational age, or prematurely, ingest more breast milk or formula and, unless there are complications that require extra calories, usually exhibit catch-up growth in the first 6 months. These infants should be fed on demand and provided as much as they want unless they are vomiting (not just spitting up).

2.**(B).**

- Weight loss in first few days: 5%–10% of birth weight
- Return to birth weight: 7–10 days of age
- Double birth weight: 4–5 months
- Triple birth weight: 1 year
- Daily weight gain:
  *20–30 g for first 3–4 month
  *15–20 g for rest of the first year

3.**(E).**

4.**(C).**

- Average length: 20 at inches birth, 30 in. at 1 year
- At age 4 years, the average child is double birth length or 40 in.

5.**(D).** Average HC: 35 cm at birth (13.5 in.). HC increases: 1 cm per month for first year (2 cm per month for first 3 months, then slower).

6.**(C).** Developmental milestones of a 15-month-old child are walks backward, scribbles, stacks two blocks, uses spoon and fork, helps in housework, says three to six words, and follows commands.

7.**(C).** Developmental milestones of a 4-year-old child are balances well on each foot, hops on one foot, copies circles, draws person with three parts, brushes teeth without help, dresses without help, names colors, and understands adjectives.

8.**(B).**

- 1 yr -------- one to three words
- 2 yr -------- two- to three-word phrases
- 3 yr -------- routine uses of sentences
- 4 yr -------- routine use of sentence sequences; conversational give and-take
- 5 yr -------- complex sentences; extensive use of modifiers, pronouns, and prepositions

9.**(C).** Also clues to when a child with a communication disorder needs help, at 10 months, the child's sound-making is limited to shrieks, grunts, or sustained vowel production.

10.**(C).** Clues to When a Child with a communication disorder needs help according to age are;

- At 12 months, the child's babbling or speech is limited to vowel sounds.
- By 15 months, the child does not respond to "no," "bye-bye," or "bottle."
- By 15 months, the child does not imitate sounds or words.
- By 18 months, the child is not consistently using at least six words with appropriate meaning.
- By 21 months, the child does not respond correctly to "Give me . . . ," "Sit down," or "Come here" when spoken without gestural cues.
- By 23 months, two-word phrases that are spoken as single units (e.g., "whatszit," "thankyou," "allgone") have not emerged.

11.**(C).**

- walk up and down stairs ---- 2 years
- walk steps alternating feet ---- 3 years
- balance well on each foot ---- 4 years
- heel-to-toe walks ---- 5 years
- balance on each foot 6 sec ---- 6 years

12.**(A).**

13.**(D).** Developmental milestones of a 6-year-old child are balances on each foot 6 sec, copies triangle, draws person with six parts, defines words, and begins to understand right and left.

14.**(C).**

- Speech disorders include articulation, fluency, and resonance disorders.

*Articulation disorders include difficulties producing sounds in syllables or saying words incorrectly to the point that other people cannot understand what is being said.

*Fluency disorders include problems such as stuttering, the condition in which the flow of speech is interrupted by abnormal stoppages, repetitions (st-st-stuttering), or prolonging sounds and syllables (ssssstuttering).

*Resonance or voice disorders include problems with the pitch, volume, or quality of a child's voice that distract listeners from what is being said.

- Language disorders can be either receptive or expressive.

*Receptive disorders refer to difficulties understanding or processing language.

*Expressive disorders include difficulty putting words together, limited vocabulary, or inability to use

language in a socially appropriate way

15.**(B).**

- Spastic cerebral palsy: the most common form of cerebral palsy, it accounts for 70%–80% of cases. It results from injury to the upper motor neurons of the pyramidal tract. It may occasionally be bilateral. It is characterized by at least two of the following: abnormal movement pattern, increased tone, or pathologic reflexes (e.g., Babinski response, hyperreflexia).
- Dyskinetic cerebral palsy: occurs in 10%–15% of cases. It is dominated by abnormal patterns of movement and involuntary, uncontrolled, recurring movements.
- Ataxic cerebral palsy: accounts for <5% of cases. This form results from cerebellar injury and features abnormal posture or movement and loss of orderly muscle coordination or both.
- Dystonic cerebral palsy: also uncommon. It is characterized by reduced activity and stiff movement (hypokinesia) and hypotonia.
- Choreoathetotic cerebral palsy: rare now that excessive hyperbilirubinemia is aggressively prevented and treated. This form is dominated by increased and stormy movements (hyperkinesia) and hypotonia

16.**(D).** Developmental milestones of a 9-month-old infant are pulls to stand, gets into sitting position, starting to pincer grasp, bangs two blocks together, waves bye-bye, plays pat-a-cake, says Dada and Mama, but nonspecific, and two-syllable sounds.

17.**(C).**

18.**(B).**

19.**(C).** Inferences about vision may be made by examining gross motor milestones (children with vision problems may have a delay) and by physical examination of the eye. Inferences about hearing are drawn from asking parents about responses to sound and speech and by examining speech and language development closely.

20.**(B).** Although there are several tools, many pediatricians use the Modified Checklist for Autism in Toddlers (M-CHAT).

21.**(B).**

22.**(B).** Children are screened for anemia at ages when there is a higher incidence of iron deficiency anemia. Infants are screened at birth and again at 4 months if there is a documented risk, such as low birth weight or prematurity. Healthy term infants usually are screened at 12 months of age because this is when a high incidence of iron deficiency is noted.

23.**(B).** Centers for Disease Control and Prevention (CDC) recommends environmental investigation at blood lead levels of 20 µg/dL on a single visit or

persistent 15 µg/dL over a 3-month period, levels of 5 to 10 µg/dL may cause learning problems.

24.**(C).** The American Academy of Pediatrics (AAP) recommends dyslipidemia screening in the context of regular health care for at-risk populations by obtaining a fasting lipid profile. The recommended screening levels are the same for all children 2 to 18 years. Total cholesterol of less than 170 mg/dL is normal, 170 to 199 mg/dL is borderline, and greater than 200 mg/dL is elevated.

25.**(A).**

Cholesterol Risk Screening Recommendations;

Risk screening at ages 2, 4, 6, 8, 10 and annually in adolescence:

1. Children and adolescents who have a family history of high cholesterol or heart disease
2. Children whose family history is unknown
3. Children who have other personal risk factors: obesity, high blood pressure, or diabetes

Universal screening at ages 9–11 and ages 18–20

26.**(C).** Toddlers and preschoolers over age 2 or who have outgrown the rear-facing car seat should use a forward-facing car seat with harness for as long as possible, up to the highest weight or height recommended by the manufacturer.

27.**(B).**

28.**(E).** An evaluation for primary amenorrhea should be considered for any female adolescent who has not reached menarche by 15 years or has not done so within 3 years of thelarche. Lack of breast development by age 13 years also should be evaluated

29.**(B).** Developmental milestones of a 6-month-old infant are sits alone, transfers object hand to hand, feeds self, holds bottle, and babbles.

30.**(D).** Older school-age children who begin to participate in competitive sports should have a comprehensive sports history and physical examination, including a careful evaluation of the cardiovascular system. The American Academy of Pediatrics 4th edition sports preparticipation form is excellent for documenting cardiovascular and other risks.

31.**(B).**